The Wayback Machine - https://web.archive.org/web/20210421145717/https://www.kellogg.northwestern.ed... Kellogg School of Management

# **Transatlantic Theory Workshop 2018**



The Kellogg School of Management is pleased to host the 11th edition of the Transatlantic Theory Workshop 2018. This annual event gathers researchers in economic theory from Northwestern University, Oxford University, and institutions from the Paris area. The workshop will take place September 4th-6th, 2018 at the Kellogg Global Hub in Evanston, Illinois.



Registration for the conference has closed.

#### CONTACT

Please contact Carly Loonan with questions about the workshop.

#### Carly Loonan

Academic Events Coordinator Kellogg MEDS/OPS Department

🖌 EMAIL

## Speakers







## Elizabeth Baldwin

Associate Professor and Roger Van Noorden Fellow in Economics, Hertford College, Oxford University

**VIEW PROFILE** 

## Agenda

## Tuesday, September 4th

TIME	EVENT	LOCATION
9:30 AM - 10:00 AM	Check-In and Continental Breakfast	Kellogg Global Hub, 5101
10:00 AM - 10:45 AM	David Ronayne, "Competing Sales Channels"	Kellogg Global Hub, 5101
10:45 AM - 11:30 AM	Harry Di Pei, "Trust and Betrayals: Reputation Building and Milking without Commitment"	Kellogg Global Hub, 5101
11:30 AM - 11:45 AM	Break	Kellogg Global Hub
11:45 AM - 12:30 PM	Daniel Quigley, "Inside and Outside Information"	Kellogg Global Hub, 5101
12:30 PM - 2:00 PM	Lunch	Kellogg Global Hub, 4101
2:00 PM - 2:45 PM	Piotr Dworczak, "Redistribution through Markets"	Kellogg Global Hub, 5101
2:45 PM - 3:30 PM	Inés Moreno de Barreda, "Persuasion with Correlation Neglect"	Kellogg Global Hub, 5101

## Joyee Deb

Assistant Professor of Economics, Yale School of Management

VIEW PROFILE

Assistant Pro

Assistant Pro Northwesterr

VIEW PROFIL



# Piotr Dy

3:30 PM - 4:00 PM	Break	Kellogg Global Hub
4:00 PM - 4:45 PM	Teddy Mekonnen, "Bayesian Comparative Statics"	Kellogg Global Hub, 5101
4:45 PM - 5:30 PM	Olivier Gossner, "Attention, Please"	Kellogg Global Hub, 5101

# Wednesday, September 5th



TIME	EVENT	LOCATION
9:30 AM - 10:00 AM	Continental Breakfast	Kellogg Global Hub, 5101
10:00 AM - 10:45 AM	Elizabeth Baldwin, "Implementing Walrasian Equilibrium - the Language of Product-Mix Auctions"	Kellogg Global Hub, 5101
10:45 AM - 11:30 AM	Tristan Tomala, "Interactive Information Design"	Kellogg Global Hub, 5101
11:30 AM - 11:45 AM	Break	Kellogg Global Hub
11:45 AM - 12:30 PM	Alex Teytelboym, "Trading Networks with Frictions"	Kellogg Global Hub, 5101
12:30 PM - 2:00 PM	Lunch	Allen Center
2:00 PM - 2:45 PM	Joyee Deb, "Reputation Building Under Uncertain Monitoring"	Kellogg Global Hub, 5101
2:45 PM - 3:30 PM	Egor Starkov, "Bad News Turned Good: Reversal Under Censorship"	Kellogg Global Hub, 5101

3:30 PM - 4:00 PM	Break	Kellogg Global Hub
4:00 - 4:45 PM	Zhiguo He, "Sovereign Debt Ratchets and Welfare Destruction"	Kellogg Global Hub, 5101
4:45 PM - 5:30 PM	Ronen Gradwohl, "Privacy in Repeated Games"	Kellogg Global Hub, 5101
5:30 PM - 7:00 PM	Reception	Kellogg Global Hub, 5301

# Thursday, September 6th

TIME	EVENT	LOCATION
9:30 AM - 10:00 AM	Continental Breakfast	Kellogg Global Hub, 5101
10:00 AM - 10:45 AM	Olivier Tercieux, "Minimizing Justified Envy in School Choice: The Design of New Orleans' One App" <i>and</i> "Top Trading Cycles in Prioritized Matching: An Irrelevance of Priorities in Large Markets"	Kellogg Global Hub, 5101
10:45 AM - 11:30 AM	Ole Jann, "Why Echo Chambers are Useful"	Kellogg Global Hub, 5101
11:30 AM - 11:45 AM	Break	Kellogg Global Hub
11:45 AM - 12:30 PM	Bryony Reich, "The Diffusion of Innovations in Social Networks: Collectivist Versus Individualist Societies"	Kellogg Global Hub, 5101
12:30 PM - 1:15 PM	Alessandro Pavan, "Robust Predictions in Dynamic Screening"	Kellogg Global Hub, 5101



Lunch

# **Program Details**

## Abstracts



SPEAKER	TITLE AND ABSTRACT
Elizabeth Baldwin	"Implementing Walrasian Equilibrium - the Language of Product- Mix Auctions"
	We describe bidding languages for practical sealed-bid auctions that implement competitive-equilibrium allocations of multiple differentiated goods. These bidding languages can be interpreted geometrically; our analysis of them uses similar techniques to our work on consumer theory for indivisible goods (Baldwin and Klemperer, 2012, 2018). In particular, the geometric techniques developed there allow us to prove that the set of the preferences that can be expressed in our "strong substitutes" bidding language corresponds exactly to the set of all valuations in this widely- studied class; such a presentation does not seem to have previously existed. Moreover we conjecture that a natural extension of that language corresponds exactly to the set of all substitutes valuations (proof is work in progress). Companion work (with Paul Goldberg) develops solution algorithms for the auctions; some software implementations are at http://pma.nuff.ox.ac.uk
Joyee Deb	"Reputation Building Under Uncertain Monitoring"
	We study reputation building under uncertainty: For example, a firm wants to build a reputation for quality; it faces consumers who make purchase decisions based only on public signals of quality like product reviews on a review website, but are uncertain about how exactly to interpret the reviews and link them to the firm's actions. Formally, we study a canonical reputation model with a long-run (LR) player facing a sequence of short-run (SR) opponents, with one difference: The LR player knows the monitoring structure, but SR players are uncertain about it. Can the firm build a reputation under such uncertainty? We show that standard reputation results break down: Even if there is a possibility that firm is a commitment type that plays the Stackelberg action, there exist "bad" equilibria in which the firm gets payoffs no higher than in the one-shot game. We present

	necessary and sufficient conditions to restore reputation building. In contrast to existing literature, reputation building requires dynamic commitment types that switch between "signaling actions" that help the SR players learn the monitoring structure and "collection actions" that are desirable for payoffs.
Piotr Dworczak	"Redistribution through Markets"
DWOICZAK	When macroeconomic tools fail to respond to wealth inequality optimally, regulators can still seek to mitigate inequality within individual markets. A social planner with distributional preferences might distort allocative efficiency to achieve a more desirable split of surplus, for example, by setting higher prices when sellers are poor—effectively, using the market as a redistributive tool. In this paper, we seek to understand how to design goods markets optimally in the presence of inequality. Using a mechanism design approach, we uncover the constrained Pareto frontier by identifying the optimal trade-off between allocative efficiency and redistribution in a setting where the second welfare theorem fails because of private information and participation constraints. We find that competitive equilibrium allocation is not always optimal. Instead, when there is substantial inequality across sides of the market, the optimal design uses a tax-like mechanism, introducing a wedge between the buyer and seller prices, and redistributing the resulting surplus to the poorer side of the market via lump-sum payments. When there is significant within-side inequality, meanwhile, it may be optimal to impose price controls even though doing so induces rationing.
Olivier Gossner	"Attention, Please"
	We study the impact of attention grabbing in a framework of dynamic information acquisition and choice between different objects. When choice is binary, forcing attention to an item for a limited amount of time increases demand for this item and decreases demand for the other item, irrespectively of the agent's attention strategy. With an arbitrary number of items, the same results hold provided the agent's attention strategy satisfies a certain condition of independence of irrelevant alternatives.
Ronen Gradwohl	"Privacy in Repeated Games"
Gradworn	We compare the equilibria of repeated games when players are concerned about the privacy of their time preferences. We show that when there are no privacy protections in place there is a folk theorem all feasible, individually-rational payoff profiles can be attained in equilibrium. In contrast, when privacy protections are in place, only a subset of these profiles is attainable. In particular, not all Pareto optimal profiles can be realized, and so there is a cost to protecting the privacy of privacy-concerned players.
Zhiguo He	"Sovereign Debt Ratchets and Welfare Destruction"
	An impatient and risk-neutral borrower can sell bonds to a more patient group of competitive lenders. The key problem: the borrower cannot commit to either a particular financing strategy, or a default strategy. In equilibrium, lending occurs, but gains from trade end up entirely dissipated, as lenders compete with each other and the borrower competes with himself. We uncover this

	striking result by taking a standard sovereign default model and modifying it by (i) using a government with linear preferences, and (ii) shrinking to zero the time period during which such government can commit. We show that the financing policy of the government can be computed as the ratio of (i) the wedge between the government discount rate and the return required by investors, and (ii) the semi-elasticity of the bond price function w.r.t. the debt face value. We overturn an old result of Bulow & Rogoff, which argues that a borrower should never buy back his own bonds. We analyze commitment devices that allow the borrower to recapture some of the gains from trade – sovereign debt ceilings and constant issuance policies.
Ole Jann	"Why Echo Chambers are Useful"
	Why do people appear to forgo information by sorting into "echo chambers"? We construct a highly tractable multi-sender, multi- receiver cheap talk game in which players choose with whom to communicate. We show that segregation into small, homogeneous groups can improve everybody's information and generate Pareto- improvements. Polarized preferences create a need for segregation; uncertainty magnifies this need. Using data from Twitter, we examine the relationship between the informativeness of debate and the political distance between a Twitter user and his likely audience.
Teddy	"Bayesian Comparative Statics"
Mekonnen	We study how information affects equilibria and welfare in games. For an agent, more precise information about an unknown state of the world leads to a mean-preserving spread of beliefs. We provide necessary and sufficient conditions to obtain either a non- increasing-mean or a non-decreasing-mean spread of actions whenever information precision increases for at least one agent. We apply our Bayesian comparative statics framework to study informational externalities in strategic environments. In persuasion games, we derive sufficient conditions that lead to extremal disclosure of information. In oligopolistic markets, we characterize the incentives of firms to share information. In macroeconomic models, we show that information not only drives the amplitude of business cycles but also affects aggregate output. Finally, in a novel application, we compare the demand for information in covert and overt information acquisition games.
Inés	"Persuasion with Correlation Neglect"
Moreno de Barreda	We consider an information design problem in which a sender tries to persuade a receiver that has "correlation neglect", i.e., fails to understand that signals might be correlated. We first provide results about the ability of the sender to manipulate the beliefs of the receiver. We show that the receiver can change the expected posterior of the receiver in any direction. When the number of signals the sender can send is large, she can induce any posterior belief for the receiver. The implication of these results is that the utility of the sender increases in the number of signals she has. As the number of signals grows large, she can acheive her first best. We show that the optimal information structure can be implemented with fully homogeneous signals. In the case of binary utilities and more generally utilities that satisfy super-modularity, full correlation of signals is optimal. We also provide examples in

	which some negative correlation is Optimal.
Alessandro Pavan	"Robust Predictions in Dynamic Screening"
Pavan	We characterize properties of optimal dynamic mechanisms using a variational approach that permits us to tackle directly the full program. This allows us to make predictions for a considerably broader class of stochastic processes than can be handled by the "first-order, Myersonian, approach," which focuses on local incentive compatibility constraints and has become standard in the literature. Among other things, we characterize the dynamics of optimal allocations when the agent's type evolves according to a stationary Markov processes, and show that, provided the players are sufficiently patient, optimal allocations converge to the efficient ones in the long run.
Harry Di Pei	"Trust and Betrayals: Reputation Building and Milking without Commitment"
	I introduce a reputation model where all types of the reputation building agent are rational and are facing lack-of-commitment problems. I study a repeated trust game in which a patient player (e.g. seller) wishes to win the trust of some myopic opponents (e.g. buyers) but can strictly benefit from betraying them. Her benefit from betrayal is her persistent private information. I provide a tractable formula for the patient player's highest equilibrium payoff, which converges to her mixed Stackelberg payoff when the lowest benefit in the support of the prior belief vanishes. In equilibria that attain this highest payoff, reputations are built and milked gradually and the patient player's behavior must be non-stationary. This enables her to extract information rent in unbounded number of periods while minimizing her long-term reputation loss. Moreover, her reputation in equilibrium can be computed by counting the number of times she has betrayed as well as been trustworthy in the past. This captures some realistic features of online rating systems.
Daniel Quigley	"Inside and Outside Information"
~~·y/~/	We study the resolution of asymmetric information when privately informed agents strategically disclose inside information, while uninformed agents also observe exogenous outside information. We fully characterize the range of possible informational outcomes in equilibrium. A novel effect is that the classic 'unraveling' spiral can work in reverse, so that strategic complementarities work in favor of non-disclosure. We establish that better outside information can reduce overall market informativeness by crowding out inside information. In an application to optimal financial stress tests, we show that our results facilitate a tractable analysis of information design. Finally, we derive empirical predictions for corporate disclosures.
Bryony Reich	"The Diffusion of Innovations in Social Networks: Collectivist Versus Individualist Societies"
	This paper determines how different network structures influence the diffusion of innovations. We develop a model of diffusion where: 1. an individual's decision to adopt a new technology is influenced by his contacts; and 2. contacts can discuss,

	coordinate, and make adoption decisions together. A measure of connectedness, 'cohesion', determines diffusion. A cohesive community is defined as a group in which all members have a high proportion of their contacts within the group. We show a key trade- off: on one hand, a cohesive community can hinder diffusion by blocking the spread of a technology into the group; on the other hand, cohesive communities can be particularly effective at acting collectively to adopt an innovation. We find that for technologies with low externalities (that require few people to adopt before others are willing to adopt), social structures with loose ties, where people are not part of cohesive groups, enable greater diffusion. However, as externalities increase (technologies require more people to adopt before others are willing to adopt), social structures with increasingly cohesive groups enable greater diffusion. Given that societal structure is known to differ systematically along this dimension, our findings point to specialization in technological progress exhibiting these patterns.
David Ronayne	"Competing Sales Channels"
	We study strategic interactions in markets where firms sell to consumers both directly and via a competitive channel (CC), such as a price comparison website or marketplace, where multiple sellers' offers are visible at once. We ask how a CC's relative size influences market outcomes. A bigger CC means more consumers compare prices, increasing within-channel competition. However, such seemingly pro-competitive developments can raise prices and reduce consumer surplus by weakening between-channel competition. We also use the model to study relevant active policy issues including price clauses, integrated ownership structures, and access to consumers' purchase data.
Egor Starkov	"Bad News Turned Good: Reversal Under Censorship".
Stantov	Sellers often have power to censor the reviews of their products. We explore the effect of censorship policies in markets where some share of consumers is unaware of possible censorship. We find that if the share of such "naive" consumers is sufficiently small then rational consumers treat any bad review that is revealed in equilibrium as good news about the product quality. Moreover, in any equilibrium the low type seller is more likely to censor reviews than the high type seller.
Olivier Tercieux	"Minimizing Justified Envy in School Choice: The Design of New Orleans' One App"
	In 2012, New Orleans became the first school district to use a mechanism based on Top Trading Cycles (TTC) in real-life allocation problem. TTC is Pareto efficient and strategy-proof, but so are other mechanisms including serial dictatorship. We show that TTC minimizes justified envy among all Pareto efficient and strategy-proof mechanisms when each school has one seat. When schools have more than one seat, TTC admits less justified envy than serial dictatorship in an average sense. Using data from New Orleans and Boston, we show that TTC has significantly less justified envy compared to serial dictatorship.
	and
	"Top Trading Cycles in Prioritized Matching: An Irrelevance of

	Priorities in Large Markets"
	We study top trading cycles (TTC) algorithm in a prioritized matching environment under the assumption that individuals' preferences and objects' priorities are uniform iid. Although TTC favors agents with high priorities in the assignment, we show that as the market grows large, the effect of priorities in TTC disappears, leading in the limit to an assignment that entails virtually the same amount of justified envy as does Random Serial Dictatorship, which completely ignores priorities.
Alex Teytelboym	"Trading Networks with Frictions"
Teyteiboyin	We show how frictions and continuous transfers jointly affect equilibria in a model of matching in trading networks. Our model incorporates distortionary frictions such as transaction taxes, bargaining costs, and incomplete markets. When contracts are fully substitutable for firms, competitive equilibria exist and coincide with outcomes that satisfy a cooperative stability property called trail stability. In the presence of frictions, competitive equilibria might be neither stable nor (constrained) Pareto-efficient. In the absence of frictions, on the other hand, competitive equilibria are stable and in the core, even if utility is imperfectly transferable.
Tristan Tomala	"Interactive Information Design"
ισπαια	We study the interaction between multiple information designers who try to influence the behavior of a set of agents. When the set of messages available to each designer is finite, such games always admit subgame perfect equilibria. When designers produce public information about independent pieces of information, every equilibrium of the direct game in which the set of messages coincides with the set of states, is an equilibrium with larger and possibly infinite message sets. The converse is true for a class of Markovian equilibria only. When designers produce information for their own corporation of agents, pure strategy equilibria exist and are characterized via an auxiliary normal form game.

# Logistics

## **Getting Here & Parking**

### Air

Major airlines fly into both O'Hare International Airport and Midway International Airport. O'Hare Airport is approximately 45 minutes from Kellogg and Midway Airport is approximately 60 minutes from Kellogg, but you may want to allow more time for traffic.

Taxi service from both airports can be arranged in advance of your visit for a reduced fare. Prearranged rides start at approximately \$35 from O'Hare and \$50 from Midway. For up-to-date fare information, please contact a taxi service directly.

- Norshore Cab Company: 847.864.7500
- American Taxi: 847.255.9600
- Uber
- Lyft

### Parking

Upon arriving to campus, park at either the North Campus Parking Garage (2311 North Campus Drive) or South Campus Parking Garage (1847 Campus Drive). The North Campus Parking Garage is closer to the Global Hub. The daily parking fee is \$8.25.

### Where to Stay

We recommend the following hotels, all located in Evanston near campus and the Kellogg Global Hub.

### Hilton Garden Inn The Hilton

1818 Maple Ave., Evanston, IL 60201 Phone: 847.475.6400 or 1.877.STAYHGI

### Hilton Orrington/Evanston

1710 Orrington Ave., Evanston, IL 60201 Phone: 888.677.4648

### Hyatt House Chicago/Evanston

1515 Chicago Ave., Evanston, IL 60201 Phone: 847.864.2300

### **Public Transportation**

 $\Leftrightarrow$ 

The Chicago Transit Authority (CTA) maintains an extensive system of elevated trains (also known as "the L") and buses throughout Chicago and Evanston. The train stop closest to Kellogg is the Purple Line Foster stop on Church and Davis Streets. The 201 bus departs from the Howard St. terminal and stops on the corner of Foster and Sheridan.

Be advised, while inexpensive, taking the CTA from the airport can take up to 90 minutes and requires transferring trains.

VISIT THE CTA TRIP PLANNER



Organizers

Alireza Tahbaz-Salehi

Eran Shmaya



#### ASSOCIATE PROFESSOR OF MANAGERIAL ECONOMICS SCHOOL OF MANAGEMENT

Alireza Tahbaz-Salehi joined the Managerial Economics and De Kellogg School of Management in 2017. Prior to joining Kellogg Professor of Business at Columbia Business School. His resear network economies for information aggregation, business cycle